

TOP SECRET - 141520

(c) determining the identity of the nucleotides located at the positions corresponding to nucleotides 35 and 46 of SEQ ID No. 3.

13. A test kit suitable for determining the vex2 and pep27 genotype of a bacteria thereby

5 determining whether said bacteria is likely to be tolerant to at least one antibiotic comprising:

- (a) a predetermined amount of a first amplification primer complementary to a region of the vex2 gene 5' to the location corresponding to nucleotide 41 of SEQ ID No. 1;
- 10 (b) a predetermined amount of a second amplification primer complementary to a region of the vex2 gene 3' to the location corresponding to nucleotide 67 of SEQ ID No. 1; and
- (c) a predetermined amount of a third amplification primer complementary to a region of the pep27 gene 5' to the location corresponding to nucleotide 35 of SEQ ID No. 3; and
- (d) a predetermined amount of a fourth amplification primer complementary to a region of the pep27 gene 3' to the location corresponding to nucleotide 46 of SEQ ID No. 3;
- (e) other reagents; and
- (f) directions for use of said kit,

wherein said first amplification primer and said second amplification primer can be used to amplify a region of the vex2 gene that distinguishes the type 4 and R6 alleles and said third amplification primer and said fourth amplification primer can be used to amplify a region of the pep27 gene that distinguishes the type 4 and R6 alleles.

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14. The kit of claim 13 wherein said first amplification primer is SEQ ID No. 7, said second amplification primer is SEQ ID No. 8, said third amplification primer is SEQ ID No. 9, and said fourth amplification primer is SEQ ID No. 10.

30 15. The kit of claim 13 further comprising:

(g) a predetermined amount of a fifth amplification primer complementary to a region of the vncS gene 5' to the location corresponding to nucleotide 79 of SEQ ID. No. 5; and

5 (h) a predetermined amount of a sixth amplification primer complementary to a region of the vncS gene 3' to the location corresponding to nucleotide 79 of SEQ ID. No. 5,

wherein said fifth amplification primer and said sixth amplification primer can be used to amplify a region of the vncS gene that distinguishes the wildtype and tolerant alleles.

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16. The kit of claim 15 wherein said fifth amplification primer is SEQ ID No. 11 and said sixth amplification primer is SEQ ID No. 12.

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